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| APPLICATION NO.              | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |  |
|------------------------------|-------------|----------------------|---------------------|------------------|--|
| 10/624,441                   | 07/22/2003  | David Miles          | 9052-160            | 6411             |  |
| 20792                        | 7590        | 06/07/2006           | EXAMINER            |                  |  |
| MYERS BIGEL SIBLEY & SAJOVEC |             |                      |                     | NGUYEN, JIMMY T  |  |
| PO BOX 37428                 |             |                      |                     | ART UNIT         |  |
| RALEIGH, NC 27627            |             |                      |                     | PAPER NUMBER     |  |
|                              |             |                      |                     | 3725             |  |

DATE MAILED: 06/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|------------------------------|------------------------|---------------------|--|
|                              | 10/624,441             | MILES, DAVID        |  |
|                              | <b>Examiner</b>        | Art Unit            |  |
|                              | Jimmy T. Nguyen        | 3725                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 03 March 2006.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-70 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-70 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 7/11/05 is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date . . . . .  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: . . . . .

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 03, 2006 has been entered, an action on the merit follows.

***Drawings***

The amendment filed March 03, 2006 fails to fully overcome the drawing objections set forth in the last Office action. After further consideration, the objections to the drawings of “the mixer regions” and “the temperature control element” have been withdrawn. However, the drawing of “the choke” (claims 19, 36, 53 and 70) is necessary for the understanding of the subject to be patented and rule 37 CFR 1.83(a) requires that the drawings must show every feature of the invention specified in the claims. Therefore, the drawings are still objected to under 37 CFR 1.83(a), the drawing of the “choke” (claims 19, 36, 53 and 70) must be shown or the feature(s) canceled from the claim(s). Additionally, the drawings are further objected to under 37 CFR 1.83(a) for failing to show “**the mechanical screw press comprises an assembly of worms**” (claims 4 and 21); “**the mixer region further comprises a compressor region**” (claims 8, 25, 42, and 59); “**a plurality of mixer regions**” (claims 15, 32, 49 and 66); and “**first mixer region is positioned between 25 to 40% of the length of the worm assembly, and a second mixer region is positioned between 60 to 80% of the length of the worm assembly**”

(claims 17, 34, 51 and 68), these features must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

**The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter.** See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

“the mechanical screw press comprises an assembly of worms (emphasis added)” (claims 4, 21);

“the mixer region further comprises a compressor region” (claims 8, 25, 42, and 59);  
“the compressor region is positioned at the discharge end of the frusto conical member”  
(claims 11, 28, 45 and 62);  
“the compressor region is positioned at between 50 and 60% of the length of the worm  
assembly as measured from the feed inlet of the frusto conical member” (claims 12, 29, 46 and  
63).

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-70 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claims 1 and 37, the written description merely discloses that the compressing, decompressing, mixing and recompressing method steps using the screw press having a worm assembly (page 3, lines 5-8), but it does not clearly describe how the worm assembly performs the method steps or which section on the worm assembly each method step occurs. Therefore, it is unclear of how the screw press would be able to perform these method steps. Further, it is unclear whether the all four of the method steps are performed on the compressor mixer (29) or only the decompression and mixing processes are carried out by the mixer. The zoning/region for

the method steps on the worm assembly must clearly disclose in order to provide a clear understanding of what Applicant seeks patent protection.

Regarding claims 20 and 54, the written description merely discloses that the method steps of reducing the volume, increasing the volume, and reducing the volume of the process material using the screw press having a worm assembly (page 4, lines 25-29), but it does not clearly describe how the worm assembly performs the method steps or which section on the worm assembly each method step occurs. Therefore, it is unclear of how the screw press would be able to perform these method steps. The zoning/region for the method steps on the worm assembly must clearly disclose in order to provide a clear understanding of what Applicant seeks patent protection.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4-17, 21-34, 38-51 and 55-68 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 4, line 2, it is unclear whether “a tunnel” as claimed is the same tunnel as claimed in claim 1, line 8. Clarification is required.

Regarding claim 21, line 2, it is unclear whether “a tunnel” as claimed is the same tunnel as claimed in claim 20, line 7. Clarification is required.

Regarding claim 38, line 2, it is unclear whether “a tunnel” as claimed is the same tunnel as claimed in claim 37, line 2. Clarification is required.

Regarding claim 55, line 2, it is unclear whether “a tunnel” as claimed is the same tunnel as claimed in claim 54, line 2. Clarification is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 3-6, 8, 18, 20-23, 25, 35, 37-40, 42, 52, 54-57, 59, and 69, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Mange et al. (hereinafter “Mange”) (US 4,746,464).**

Regarding claims 1, 20, 37 and 54, Mange discloses an apparatus and a method for extracting liquids from a process material comprising: a mechanical screw press (fig. 1) comprises a tunnel (fig. 2) and a corresponding single “worm assembly” (fig. 1) that is adapted to extract liquids from the process material, which comprises animal carcasses (col. 1, lines 13-15) by compressing (i.e. reducing a volume of the process material) (B1), decompressing (i.e. increasing the volume of the process material) (B2) (col. 5, lines 46-62); mixing the process material (B3) by an eccentric motion of the discs (36); and recompressing (i.e. reducing the volume of the process material) (col. 6, lines 20-21). The worm assembly is arranged to rotate within the tunnel (col. 3, lines 35-37). Note that the Examiner interprets the limitation “a single worm assembly” as being a single “worm assembly”, not a “single worm” assembly. Mange

clearly discloses the screw press comprising the tunnel and the corresponding single “worm assembly”(fig. 2), wherein the single “worm assembly” having two worms (fig. 2).

Regarding claim 3, Mange discloses the decompressing of the material (B2), and the mixing of the material (B3) are performed sequentially (fig. 1).

Regarding claims 4 and 21, the screw press comprises an assembly of worms (2 and 2') in the tunnel (fig. 2) provided with a feed end (11) and a discharge end (17).

Regarding claims 5-6, 22-23, 39-40 and 56-57, Mange discloses the worm assembly comprises a mixer region (B3), wherein the mixer region comprises an element (i.e. a disc assembly (36)), and the eccentric movement of the element adapted to disrupt a flow of the material (fig. 1).

Regarding claims 8, 25, 42, and 59, the mixer region (B3) further comprises compressor region (see a right half section of the mixer region, where screw flights (37) are provided to further compress the material).

Regarding claims 18, 35, 52 and 69, Mange discloses a temperature control element (col. 2, lines 27-41) configured to control a flow of the process material.

Regarding claims 38 and 55, Mange discloses the worm assembly is disposed in the tunnel (fig. 2) provided with a feed end (11) and a discharge end (17).

**Claims 37-42, 47-51, 54-59, and 64-68, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Mackay et al. (hereinafter “Mackay”) (US 4,915,830).**

Regarding claims 37 and 54, Mackay discloses a screw press comprising: a single worm assembly (3) arranged to rotate within a tunnel (fig. 2) and adapted to extract liquids from a

process material by compressing/reducing a volume of the material; decompressing, mixing/increasing the volume of the material; and recompressing/reducing the volume of the process material (col. 2, line 48 to col. 3, line 20). As to the limitation “adapted to extract liquids from process material comprising animal carcasses”, Mackay discloses the worm assembly that is capable to perform the method steps, therefore, the worm assembly is adapted/capable to extract liquids from process material comprising animal carcasses.

Regarding claims 38 and 55, the worm assembly (3) is disposed in the tunnel (fig. 2) provided with a feed end (5) and a discharge end (6).

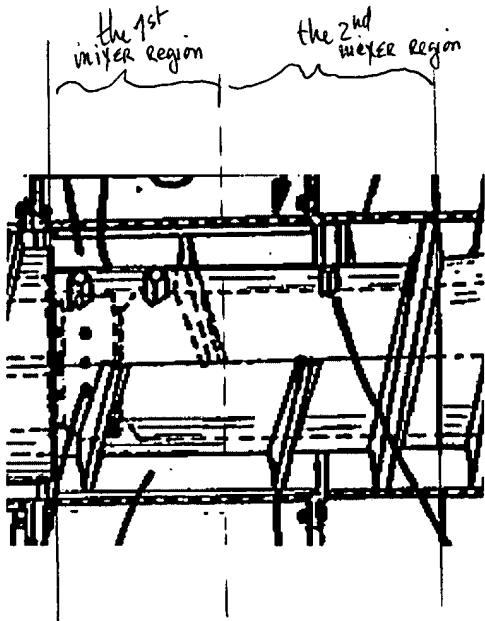
Regarding claims 39-41 and 56-58, the worm assembly comprises a mixer region (2c), wherein the mixer region comprises a tooth disc (112) adapted to disrupt a flow of the material.

Regarding claims 42 and 59, the mixer region further comprises a compressor region (see a right half of the mixer region, where screw flights (111) are provided to compress the material).

Regarding claims 47, 48, 64 and 65, the mixer region is approximately in the middle of the worm assembly and the compressor region is positioned at between 50 and 65% of the length of the worm assembly (fig. 2).

Regarding claims 49-51 and 66-68, Mackay discloses the worm assembly comprises a plurality of mixer regions (see the interpretation in the illustration below), the mixer regions are substantially evenly spaced along the length of the worm assembly (see below) and a first mixer region is positioned between 25 to 40% of the length of the worm assembly, and a second mixer region is positioned between 60 to 80% of the length of the worm assembly (see the illustration below and figure 2). Note that the length of the worm assembly is measured from a left end of a

screw shaft (see where the ref. number (56) is pointed to (fig. 2)) to a right end of the screw shaft (see where the ref. number (101) is pointed to (fig. 2)).



Regarding claims 53 and 70, the screw press comprises a choke (37).

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-2, 4-8, 13-17, 19-25, 30-34 and 36, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Mackay et al. (hereinafter “Mackay”) (US 4,915,830).**

Regarding claims 1 and 20, Mackay discloses a method comprising: compressing/reducing a volume of a process material; decompressing, mixing/increasing the volume of the material; and recompressing/deducing the volume of the process material (col. 2, line 48 to col. 3, line 20), wherein the method steps are performed via a single worm assembly (3) arranged to rotate within a tunnel (fig. 2). As to the limitation “the processed material comprises animal carcasses and/or bones”, Mackay discloses the processed material as wood chip not animal carcasses and/or bones. However, it is obvious to one ordinary skill in the art at the time of the invention that whether the process material is wood chip or animal carcasses and/or bones, the method steps are performed in the same way. Additionally, the preamble is given negligible patentable weight because the preamble does not breath life (i.e. extracting liquid from the animal carcasses and/or bone) into the body of the claim.

Regarding claim 2, Mackay discloses the decompressing and mixing steps are being performed simultaneously in section (2c) (col. 4, lines 27-38).

Regarding claims 4 and 21, the screw assembly comprises an assembly of flights (104) in the tunnel (fig. 2) provided with a feed end (5) and a discharge end (6).

Regarding claims 5-7 and 22-24, the worm assembly comprises a mixer region (2c), wherein the mixer region comprises a toothed disc (112) adapted to disrupt a flow of the material.

Regarding claims 8 and 25, the mixer region further comprises a compressor region (see a right half of the mixer region, where screw flights (111) are provided to compress the material).

Regarding claims 13-14 and 30-31, the mixer region is approximately in the middle of the worm assembly and the compressor region is positioned at between 50 and 65% of the length of the worm assembly (fig. 2).

Regarding claims 15-17 and 32-34, Mackay discloses the worm assembly comprises a plurality of mixer regions (see the interpretation in the illustration above), the mixer regions are substantially evenly spaced along the length of the worm assembly (see above) and a first mixer region is positioned between 25 to 40% of the length of the worm assembly, and a second mixer region is positioned between 60 to 80% of the length of the worm assembly (see the illustration above and figure 2). Note that the length of the worm assembly is measured from a left end of a screw shaft (see where the ref. number (56) is pointed to (fig. 2)) to a right end of the screw shaft (see where the ref. number (101) is pointed to (fig. 2)).

Regarding claims 19 and 36, the screw press comprises a choke (37).

#### ***Allowable Subject Matter***

Please note that claims 9-12, 26-29, 43-46 and 60-63 have been treated on the merits but they have not been rejected over prior art. However, in view of the issues under 35 USC 112 rejections as set forth above, the allowability of the claims can not be determined at this time.

#### ***Response to Arguments***

Applicant's arguments filed March 03, 2006 have been fully considered but they are not persuasive.

Applicant argues that Mange does not disclose the amended claims 1, 20, 37 and 54, which are now recited a screw press comprising a tunnel and corresponding single worm assembly because Mange discloses two worm assemblies. With respect to Applicant's assertions, this argument has been considered. However, the claims do not clearly define the recitation "a single worm assembly", the Examiner interprets this recitation as being a single "worm assembly" having two worms (2 and 2'), not a "single worm" assembly. Therefore, Mange does disclose the single "worm assembly" as set forth above.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy T. Nguyen whose telephone number is (571) 272-4520. The examiner can normally be reached on Mon-Thur 8:00am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on (571) 272- 4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JTNguyen  
May 26, 2006



JIMMY T. NGUYEN  
EXAMINER - AU 3725